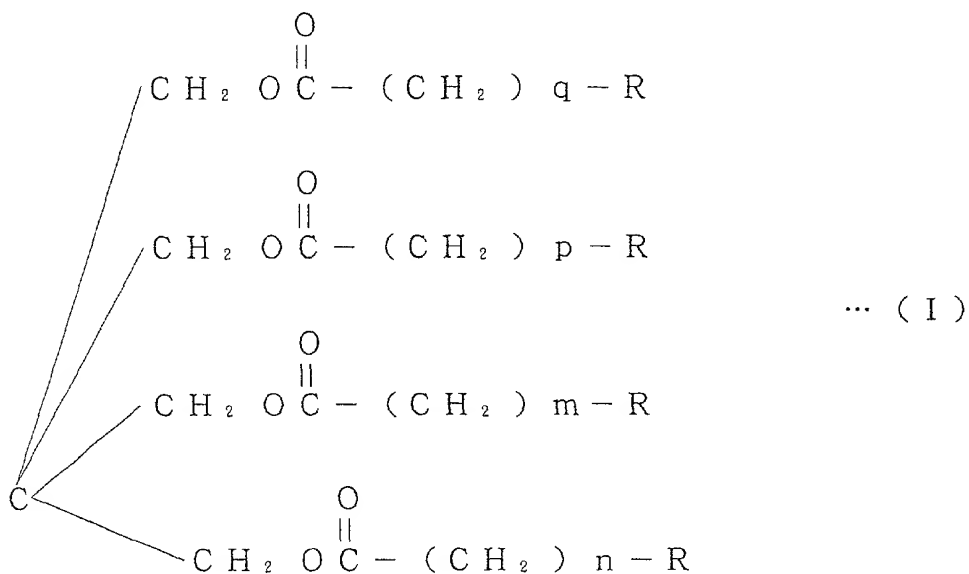


CLAIMS

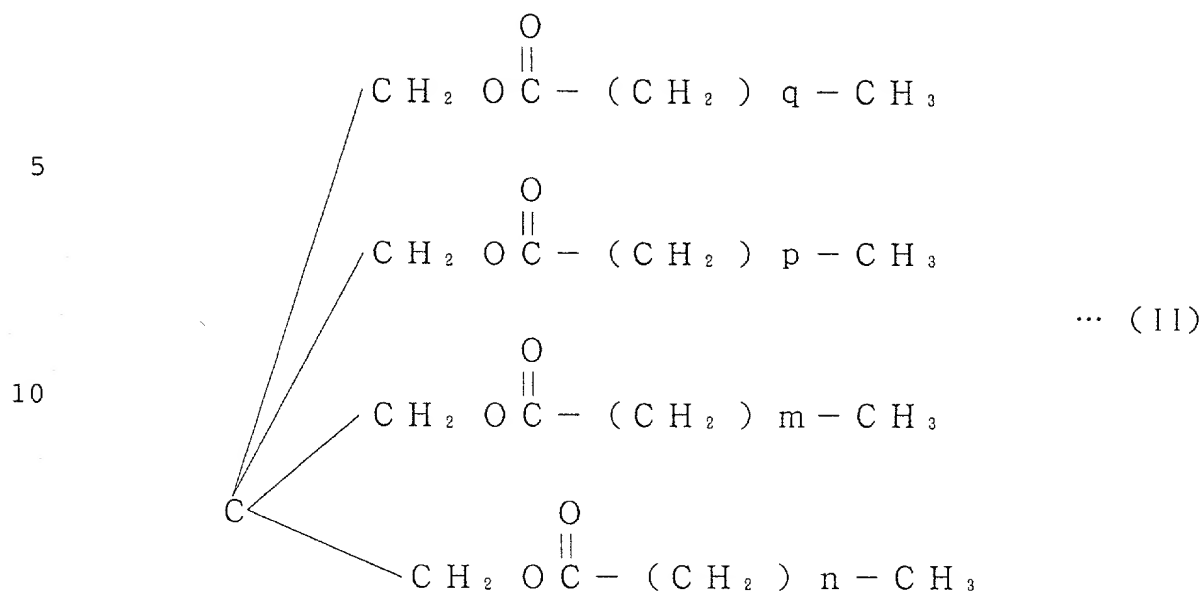
1. An electrophotographic toner comprising a binder resin and a colorant, which is used in electrophotographic process employing a flash fixing system for fixation of a transferred toner image, wherein the binder resin is a polyester resin which partially contains a chloroform-insoluble content; and

the toner contains a polypropylene resin and an ester type resin represented by the following formula (I):



wherein p, q, m and n each represents a positive integer of 16 to 22 and R may be the same or different and each represents a hydrogen atom or a lower alkyl group having 1 to 4 carbon atoms.

2. An electrophotographic toner according to claim 1, wherein the ester type resin (I) is represented by the following formula (II):



wherein p, q, m and n are as defined above, and has a weight-average molecular weight within a range from 1,350 to 1,450.

3. An electrophotographic toner according to claim 1, wherein the number-average molecular weight of the polypropylene resin is 5,000 or more.

4. An electrophotographic toner according to claim 1, wherein the ester type resin (I) contains, as a principal component, a component which has a molecular weight distribution within a range from 1,200 to 1,500 in a molecular weight distribution as determined by mass spectrometric analysis and also has one peak in the range, while an ionization efficiency of a component having a molecular weight within a range from 1,420 to 1,430 is 45% or more and an ionization efficiency of a component having a molecular weight of 1,350 or less is 10% or more.

5. An electrophotographic toner according to claim 1, which contains the chloroform-insoluble content of the polyester resin in the amount within a range from 50 to 95% by weight based on the total weight of the toner, the polypropylene resin in the amount within a range from 0.1

to 5% by weight based on the total weight of the toner, and the ester type resin (I) in the amount within a range from 0.5 to 15% by weight based on the total weight of the toner.

5 6. A method of forming an image by means of an electrophotographic process which comprises the steps of forming an electrostatic latent image by image exposure, visualizing the electrostatic latent image by development, transferring the visualized image onto the recording medium and fixing the transferred image, wherein

10 a developing agent containing the electrophotographic toner of any one of claims 1 to 5 is used in the step of developing the electrostatic latent image; and

15 a flash fixing system is used as the toner fixing system in the step of fixing the toner image after transferring the toner image, which has been visualized by the use of the developing agent, onto the recording medium.

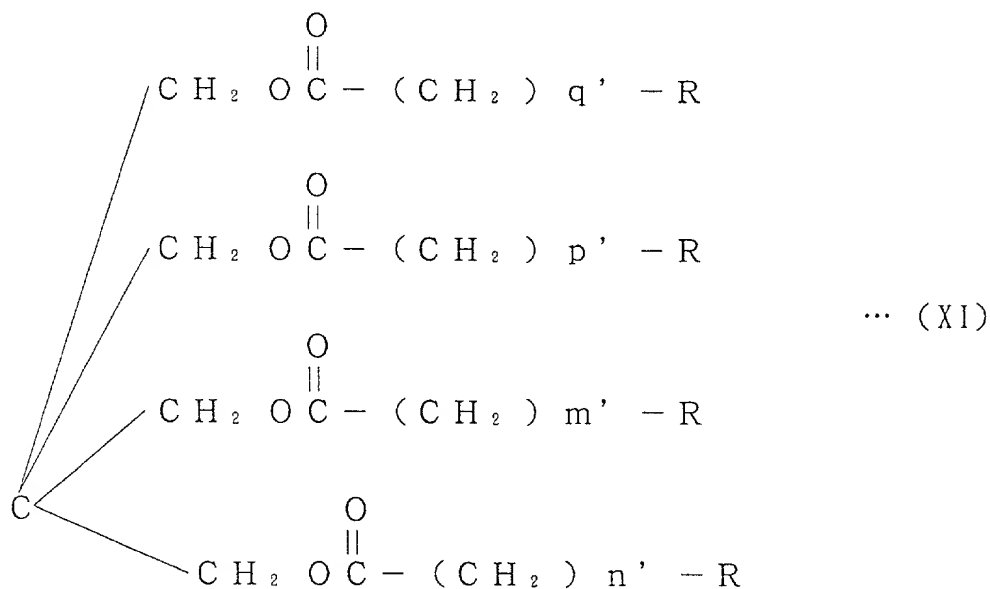
20 7. An image forming method according to claim 6, wherein the developing agent is a two-component developing agent and contains a combination of the electrophotographic toner and a carrier prepared by coating the surface of a core material with a resin.

25 8. An image forming method according to claim 7, wherein the resin-coated carrier contains doped manganese and/or doped strontium as a carrier core material and the surface of the carrier is coated with a coating agent containing a silicone resin as a principal component.

30 9. An image forming method according to any one of claims 6 to 8, wherein the energy of the flashtube is within a range from 0.5 to 3.0 J/cm² and the duration of the flash is within a range from 500 to 3,000 μ s in the flash fixing step.

35 10. An electrophotographic toner comprising a binder resin and a colorant, which is used in

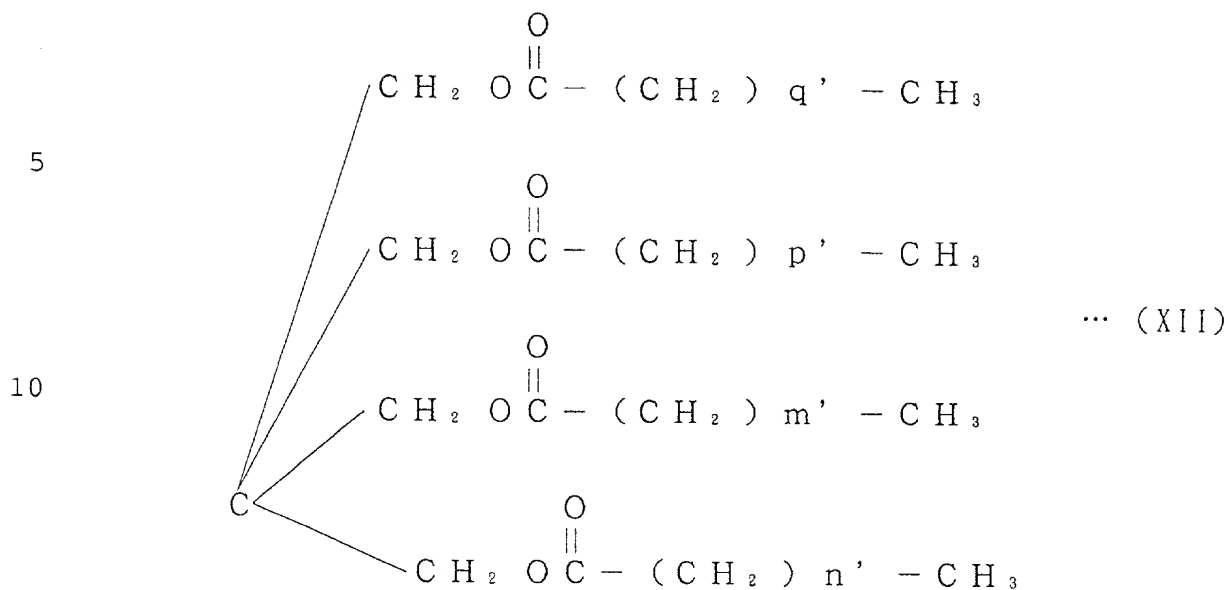
electrophotographic process employing a flash fixing system for fixation of a transferred toner image, wherein the binder resin is a polyester resin which contains an ester component represented by the following formula (XI):



wherein p', q', m' and n' each represents a positive integer of 16 to 30 and R may be the same or different and each represents a hydrogen atom or a lower alkyl group having 1 to 4 carbon atoms, and contains at least a chloroform-insoluble content; and

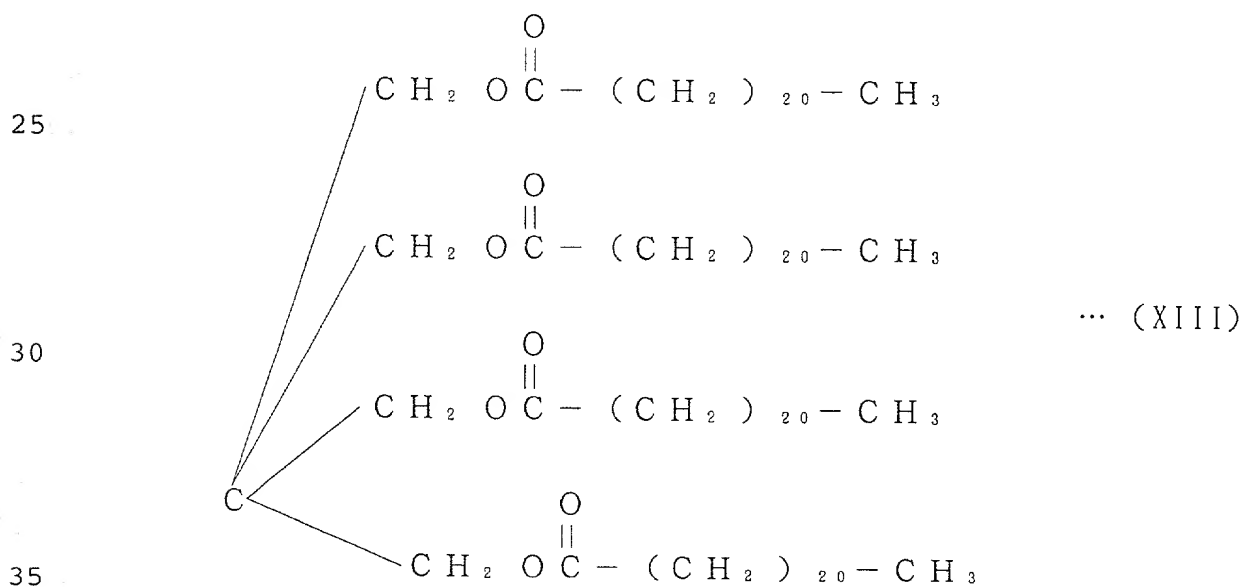
the toner optionally contains an ester type resin represented by the above formula (XI).

11. An electrophotographic toner according to claim 10, wherein the ester component (XI) is represented by the following formula (XII):



wherein p', q', m' and n' are as defined above, and has a weight-average molecular weight within a range from 1,200 to 2,200.

12. An electrophotographic toner according to claim 11, wherein the ester component (XII) is represented by the following formula (VIII).



13. An electrophotographic toner according to claim

10, wherein the ester component (XI) is introduced in the step of polymerizing the polyester resin.

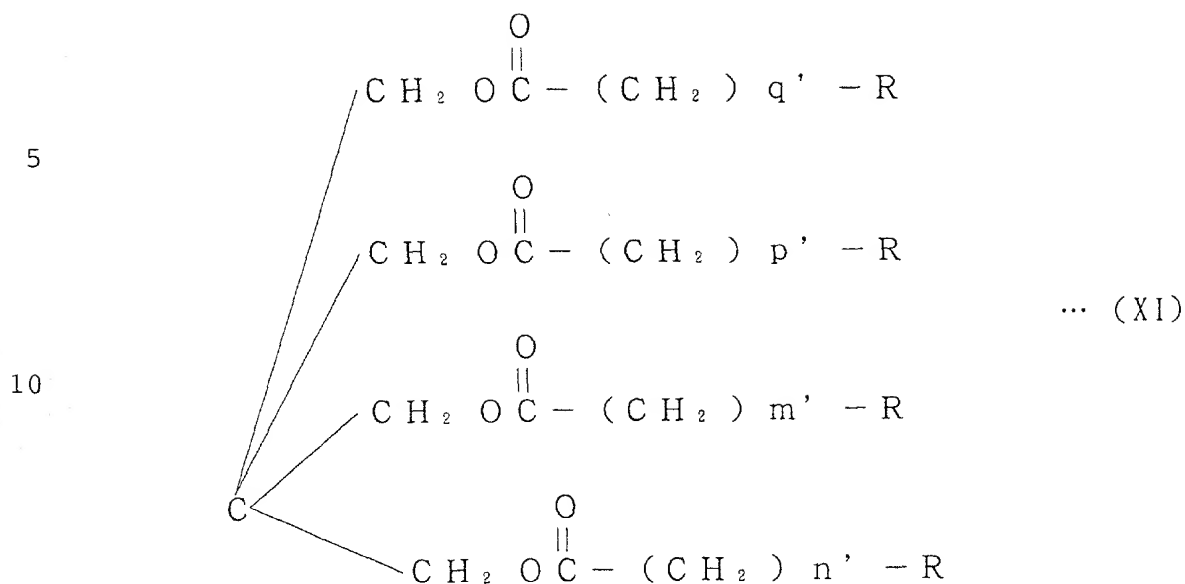
5 14. An electrophotographic toner according to claim 10, in which said polyester resin contains the ester component (XI) in the amount within a range from 0.1 to 10% by weight based on the total weight of the toner and the chloroform-insoluble content in the amount within a range from 3 to 20% by weight based on the total weight of the toner.

10 15. An electrophotographic toner according to claim 10, wherein in said polyester resin, the ester component (XI) contains, as a principal component, a component which has a molecular weight distribution within a range from 1,200 to 2,200 in a molecular weight distribution as
15 determined by mass spectrometric analysis and also has at least one maximum peak in the range, while an ionization efficiency of the maximum peak is 45% or more based on the entire component.

20 16. An electrophotographic toner according to any one of claims 10 to 15, which contains the polypropylene resin in the amount within a range from 0.1 to 5% by weight based on the total weight of the toner.

25 17. An electrophotographic toner according to claim 16, wherein the number-average molecular weight of the polypropylene resin is 5,000 or more.

30 18. An electrophotographic toner comprising a binder resin and a colorant, which is used in electrophotographic process employing a flash fixing system for fixation of a transferred toner image, wherein the binder resin is a polyester resin which contains an ester component represented by the following formula (XI):



wherein p', q', m' and n' each represents a positive integer of 16 to 30 and R may be the same or different and each represents a hydrogen atom or a lower alkyl group having 1 to 4 carbon atoms, and contains at least a chloroform-insoluble content;

the polyester resin contains at least a resin containing the ester component (XI) in the amount of 10% by weight or more; and

the toner optionally contains an ester type resin represented by the formula (XI).

19. A method of forming an image by means of an electrophotographic process which comprises the steps of forming an electrostatic latent image by image exposure, visualizing the electrostatic latent image by development, transferring the visualized image onto the recording medium and fixing the transferred image, wherein

a developing agent containing the electrophotographic toner of any one of claims 10 to 18 is used in the step of developing the electrostatic latent image; and

a flash fixing system is used as the toner

fixing system in the step of fixing the toner image after transferring the toner image, which has been visualized by the use of the developing agent, onto the recording medium.

5 20. An image forming method according to claim 19, wherein the developing agent is a two-component developing agent and contains a combination of the electrophotographic toner and a carrier prepared by coating the surface of a core material with a resin.

10 21. An image forming method according to claim 20, wherein the resin-coated carrier contains doped manganese and/or doped strontium as a carrier core material and the surface of the carrier is coated with a coating agent containing a silicone resin as a principal component.

15 22. An image forming method according to any one of claims 19 to 21, wherein the energy of the flashtube is within a range from 0.5 to 3.0 J/cm² and duration of the flashlight is within a range from 500 to 3,000 μs in the flash fixing step.